IN THE CLAIMS:

Please CANCEL claims 66 and 76 without prejudice to or disclaimer of the recited subject matter.

Please AMEND claims 61, 63, 64, 67, 69, 71, 73, 74, 77 and 79, and ADD new claims 81-84, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1-60. (Cancelled)

61. (Currently Amended) A position detection apparatus for detecting a position of a mark on an object, said apparatus comprising:

a camera which captures an image of the mark;

an extraction section which extracts an edge position ~~of the mark based on the image of the mark~~ in image data obtained by differentiating the image data;

a determination section which determines a position of the mark by comparing the edge position with a template; and

a control section which changes at least one of a parameter used by said extraction section and a parameter used by said determination section, based on a result of the comparing by said determination section.

62. (Previously Presented) An apparatus according to claim 61, wherein the parameter changed by said control section is stored in a memory and used as a base for processing to be executed later.

63. (Currently Amended) An apparatus according to claim 61, wherein said determination section performs the comparing by ~~evaluating~~ obtaining a degree of matching between the edge position and the template.

64. (Currently Amended) An apparatus according to claim 63, wherein said determination section determines the position of the mark as a center position of the template of which position is determined based on the degree of matching.

65. (Previously Presented) An apparatus according to claim 61, wherein said determination section performs the comparing using a correlation method.

66. (Cancelled)

67. (Currently Amended) An apparatus according to claim ~~66~~ 61, wherein said extraction section differentiates the ~~signal~~ image data along each of at least two directions.

68. (Previously Presented) An apparatus according to claim 61, wherein the template includes a plurality of positions of interest.

69. (Currently Amended) An apparatus according to claim 61, wherein a parameter used for at least one of a noise removal processing for the image data and a correction of the edge position is changed based on a result of the comparing by said determination section.

70. (Previously Presented) An apparatus according to claim 61, wherein said camera captures the image under a dark field illumination.

71. (Currently Amended) A position detection method of detecting a position of a mark on an object, said method comprising steps of:

capturing an image of the mark using a camera;

extracting an edge position ~~of the mark based on the image of the mark~~ in image data obtained in said capturing step by differentiating the image data;

determining a position of the mark by comparing the edge position with a template; and

changing at least one of a parameter used in said ~~extraction~~ extracting step and a parameter used in said ~~determination~~ determining step, based on a result of the comparing in said determining step.

72. (Previously Presented) A method according to claim 71, wherein the parameter changed in said changing step is stored in a memory and used as a base for processes to be executed later.

73. (Currently Amended) A method according to claim 71, wherein, in said determining step, the comparing is performed by ~~evaluating~~ obtaining a degree of matching between the edge position and the template.

74. (Currently Amended) A method according to claim 73, wherein, in said determining step, the position of the mark is determined as a center position of the template of which position is determined based on the degree of matching.

75. (Previously Presented) A method according to claim 71, wherein, in said determining step, the comparing is performed using a correlation method.

76. (Cancelled)

77. (New) A method according to claim ~~76~~ 71, wherein, in said ~~extraction~~ extracting step, the ~~signal~~ image data is differentiated along each of at least two directions.

78. (Previously Presented) A method according to claim 71, wherein the template includes a plurality of positions of interest.

79. (Currently Amended) A method according to claim 71, wherein a parameter used for at least one of a noise removal processing for the image data and a correction of the edge position is changed based on a result of the comparing in said ~~determination~~ determining step.

80. (Previously Presented) A method according to claim 71, wherein, in said capturing step, the camera captures the image under a dark field illumination.

81. (New) An apparatus according to claim 61, wherein the parameter used by said extraction section is a threshold for extracting the edge position with respect to a differential value of the image data.

82. (New) An apparatus according to claim 63, wherein the parameter used by said determination section is a threshold for determining the position of the mark with respect to the degree of matching.

83. (New) A method according to claim 71, wherein the parameter used in said extracting step is a threshold for extracting the edge position with respect to a differential value of the image data.

84. (New) A method according to claim 73, wherein the parameter used in said determining step is a threshold for determining the position of the mark with respect to the degree of matching.